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Title 40: Protection of Environment

PART 141—NATIONAL PRIMARY DRINKING WATER REGULATIONS

Subpart X—Aircraft Drinking Water Rule

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§ 141.800 Applicability and compliance date.

(a) *Applicability.* The requirements of this subpart constitute the National Primary Drinking Water Regulations for aircraft that are public water systems and that board only finished water for human consumption. Aircraft public water systems are considered transient non-community water systems (TNCWS). To the extent there is a conflict between the requirements in this subpart and the regulatory requirements established elsewhere in this part, this subpart governs.

(b) *Compliance date.* Aircraft public water systems must comply, unless otherwise noted, with the requirements of this subpart beginning October 19, 2011. Until this compliance date, air carriers remain subject to existing national primary drinking water regulations.

§ 141.801 Definitions.

As used in this subpart, the term:

Administrator means the Administrator of the United States Environmental Protection Agency or his/her authorized representative.

Air carrier means a person who undertakes directly by lease, or other arrangement, to engage in air transportation. The air carrier is responsible for ensuring all of the aircraft it owns or operates that are public water systems comply with all provisions of this subpart.

Aircraft means a device that is used or intended to be used for flight in the air.

Aircraft water system means an aircraft that qualifies as a public water system under the Safe Drinking Water Act and the national primary drinking water regulations. The components of an aircraft water system include the water service panel, the filler neck of the aircraft finished water storage tank,

and all finished water storage tanks, piping, treatment equipment, and plumbing fixtures within the aircraft that supply water for human consumption to passengers or crew.

Aircraft water system operations and maintenance plan means the schedules and procedures for operating, monitoring, and maintaining an aircraft water system that is included in an aircraft operation and maintenance program accepted by the Federal Aviation Administration. (14 CFR part 43, 14 CFR part 91, 14 CFR part 121)

Finished water means water that is introduced into the distribution system of a public water system and is intended for distribution and consumption without further treatment, except as treatment necessary to maintain water quality in the distribution system (e.g., supplemental disinfection, addition of corrosion control chemicals). (40 CFR 141.2)

Human consumption means drinking, bathing, showering, hand washing, teeth brushing, food preparation, dishwashing, and maintaining oral hygiene.

Self inspection means an onsite review of the aircraft water system, including the water service panel, the filler neck of the aircraft finished water storage tank; all finished water storage tanks, piping, treatment equipment, and plumbing fixtures; and a review of the aircraft operations, maintenance, monitoring, and recordkeeping for the purpose of evaluating the adequacy of such water system components and practices for providing safe drinking water to passengers and crew.

Watering point means the water supply, methods, and facilities used for the delivery of finished water to the aircraft. These facilities may include water trucks, carts, cabinets, and hoses.

§ 141.802 Coliform sampling plan.

(a) Each air carrier under this subpart must develop a coliform sampling plan covering each aircraft water system owned or operated by the air carrier that identifies the following:

- (1) Coliform sample collection procedures that are consistent with the requirements of § 141.803(a) and (b).
- (2) Sample tap location(s) representative of the aircraft water system as specified in § 141.803(b)(2) and (b)(4).
- (3) Frequency and number of routine coliform samples to be collected as specified in § 141.803(b)(3).
- (4) Frequency of routine disinfection and flushing as specified in the operations and maintenance plan under § 141.804.
- (5) Procedures for communicating sample results promptly so that any required actions, including repeat and follow-up sampling, corrective action, and notification of passengers and crew, will be conducted in a timely manner.

(b) Each air carrier must develop a coliform sampling plan for each aircraft with a water system meeting the definition of a public water system by April 19, 2011.

(c) The coliform sampling plan must be included in the Aircraft Water System Operations and Maintenance Plan required in § 141.804. Any subsequent changes to the coliform sampling plan must also be included in the Aircraft Water System Operations and Maintenance Plan required in § 141.804.

§ 141.803 Coliform sampling.

(a) *Analytical methodology.* Air carriers must follow the sampling and analysis requirements under this section.

- (1) The standard sample volume required for total coliform analysis, regardless of analytical method used, is 100 mL.

(2) Air carriers need determine only the presence or absence of total coliforms and/or *E. coli*; a determination of density of these organisms is not required.

(3) Air carriers must conduct analyses for total coliform and *E. coli* in accordance with the analytical methods approved in § 141.21(f)(3) and 141.21(f)(6)) until March 31, 2016, and in accordance with the analytical methods approved in § 141.852 beginning April 1, 2016.

(4) The time from sample collection to initiation of analysis may not exceed 30 hours. Systems are encouraged but not required to hold samples below 10 °C during transit.

(5) The invalidation of a total coliform sample result can be made only by the Administrator in accordance with § 141.21(c)(1)(i), (ii), or (iii) or by the certified laboratory in accordance with § 141.21(c)(2) until March 31, 2016, or in accordance with § 141.853(c) beginning April 1, 2016, with the Administrator acting as the State.

(6) *Certified laboratories.* For the purpose of determining compliance with this subpart, samples may be considered only if they have been analyzed by a laboratory certified by a State or EPA. For the purposes of this paragraph, "State" refers to a State or Tribe that has received primacy for public water systems (other than aircraft water systems) under section 1413 of SDWA.

(b) *Routine monitoring.* For each aircraft water system, the sampling frequency must be determined by the disinfection and flushing frequency recommended by the aircraft water system manufacturer, when available, and as identified in the operations and maintenance plan in § 141.804.

(1) Except as provided in paragraph (b)(2) of this section, the air carrier must collect two 100 mL total coliform routine samples at the frequency specified in the sampling plan in § 141.802 and in accordance with paragraph (b)(3) of this section;

(2) The air carrier may collect one 100 mL total coliform routine sample at the frequency specified in the sampling plan in § 141.802 for aircraft with a removable or portable tank that is drained every day of passenger service, and the aircraft has only one tap. Aircraft meeting the requirements of this paragraph do not have to comply with paragraph (b)(4) of this section.

(3) Air carriers must perform routine monitoring for total coliform at a frequency corresponding to the frequency of routine disinfection and flushing as specified in the Table b-1 (Routine Disinfection and Flushing and Routine Sample Frequencies). Air carriers must follow the disinfection and flushing frequency recommended by the aircraft water system manufacturer, when available. Where the aircraft water system manufacturer does not specify a recommended routine disinfection and flushing frequency, the air carrier must choose a frequency from Table b-1 (Routine Disinfection and Flushing and Routine Sample Frequencies):

TABLE B-1—ROUTINE DISINFECTION AND FLUSHING AND ROUTINE SAMPLE FREQUENCIES

Minimum routine disinfection & flushing per aircraft	Minimum frequency of routine samples per aircraft
At least 4 times per year = At least once within every three-month period (quarterly)	At least 1 time per year = At least once within every twelve-month period (annually).
At least 3 times per year = At least once within every four-month period	At least 2 times per year = At least once within every six-month period (semi-annually).
At least 2 times per year = At least once within every six-month period (semi-annually)	At least 4 times per year = At least once within every three-month period (quarterly).
At least 1 time per year or less = At least once within every twelve-month period (annually) or less	At least 12 times per year = At least once every month (monthly).

(4) One sample must be taken from a lavatory and one from a galley; each sample must be analyzed for total coliform. If only one water tap is located in the aircraft water system due to aircraft model type and construction, then a single tap may be used to collect two separate 100 mL samples.

(5) If any routine, repeat, or follow-up coliform sample is total coliform-positive, the air carrier must analyze that total coliform-positive culture medium to determine if *E. coli* is present.

(6) Routine total coliform samples must not be collected within 72 hours after completing routine disinfection and flushing procedures.

(c) *Routine coliform sample results* —(1) *Negative routine coliform sample results*. If all routine sample results are total coliform-negative, then the air carrier must maintain the routine monitoring frequency for total coliform as specified in the sampling plan in § 141.802.

(2) *Positive routine *E. coli* sample results*. If any routine sample is *E. coli* -positive, the air carrier must perform all of the following:

(i) *Restrict public access*. Restrict public access to the aircraft water system in accordance with paragraph (d) of this section as expeditiously as possible, but in no case later than 24 hours after the laboratory notifies the air carrier of the *E. coli* -positive result or discovery of the applicable failure as specified in paragraphs (g) and (h) of this section. All public access restrictions, including applicable public notification requirements, must remain in-place until the aircraft water system has been disinfected and flushed and a complete set of follow-up samples is total coliform-negative; and

(ii) *Disinfect and flush*. Conduct disinfection and flushing in accordance with § 141.804(b)(2). If the aircraft water system cannot be physically disconnected or shut-off, or the flow of water otherwise prevented through the tap(s), then the air carrier must disinfect and flush the system no later than 72 hours after the laboratory notifies the air carrier of the *E. coli* -positive result or discovery of the applicable failure as specified in paragraphs (g) and (h) of this section; and

(iii) *Follow-up sampling*. Collect follow-up samples in accordance with paragraph (e) of this section. A complete set of follow-up sample results must be total coliform-negative before the air carrier provides water for human consumption from the aircraft water system and returns to the routine monitoring frequency as specified in the sampling plan required by § 141.802.

(3) *Positive routine total coliform sample results*. If any routine sample is total coliform-positive and *E. coli* -negative, then the air carrier must perform at least one of the following three corrective actions and continue through with that action until a complete set of follow-up or repeat samples is total coliform-negative:

(i) *Disinfect and flush*. In accordance with § 141.804(b)(2), conduct disinfection and flushing of the system no later than 72 hours after the laboratory notifies the air carrier of the total coliform-positive and *E. coli* -negative result. After disinfection and flushing is completed, the air carrier must collect follow-up samples in accordance with paragraph (e) of this section prior to providing water for human consumption from the aircraft water system. A complete set of follow-up sample results must be total coliform-negative before the air carrier returns to the routine monitoring frequency as specified in the sampling plan required by § 141.802; or

(ii) *Restrict public access*. In accordance with paragraph (d) of this section, restrict public access to the aircraft water system as expeditiously as possible, but in no case later than 72 hours after the laboratory notifies the air carrier of the total coliform-positive and *E. coli* -negative result or discovery of the applicable failure as specified in paragraphs (f), (g), and, (i) of this section. All public access restrictions, including applicable public notification requirements, must remain in-place until the aircraft water system has been disinfected and flushed, and a complete set of follow-up samples has been collected. The air carrier must conduct disinfection and flushing in accordance with § 141.804(b)(2). After disinfection and flushing is completed, the air carrier must collect follow-up samples in accordance with paragraph (e) of this section prior to providing water for human consumption from the aircraft water system. A complete set of follow-up sample results must be total coliform-negative before the air carrier returns to the routine monitoring frequency as specified in the sampling plan required by § 141.802; or

(iii) *Repeat sampling*. Collect three 100 mL repeat samples no later than 24 hours after the laboratory notifies the air carrier of the routine total coliform-positive and *E. coli* -negative result.

Repeat samples must be collected and analyzed from three taps within the aircraft as follows: The tap which resulted in the total coliform-positive sample, one other lavatory tap, and one other galley tap. If fewer than three taps exist, then a total of three 100 mL samples must be collected and analyzed from the available taps within the aircraft water system.

(A) If all repeat samples are total coliform-negative, then the air carrier must maintain the routine monitoring frequency for total coliform as specified in the sampling plan in § 141.802.

(B) If any repeat sample is *E. coli* -positive, the air carrier must perform all the corrective actions as specified in paragraphs (c)(2)(i), (c)(2)(ii), and (c)(2)(iii) of this section.

(C) If any repeat sample is total coliform-positive and *E. coli* -negative, then the air carrier must perform the corrective actions specified in paragraphs (c)(3)(i) or (c)(3)(ii) of this section, and continue through with that action until a complete set of follow-up samples is total coliform-negative.

(d) *Restriction of public access.* Restriction of public access to the aircraft water system includes, but need not be limited to, the following:

(1) Physically disconnecting or shutting off the aircraft water system, where feasible, or otherwise preventing the flow of water through the tap(s);

(2) Providing public notification to passengers and crew in accordance with § 141.805.

(3) Providing alternatives to water from the aircraft water system, such as bottled water for drinking and coffee or tea preparation; antiseptic hand gels or wipes in accordance with 21 CFR part 333—"Topical Anti-microbial Drug Products for Over-the-Counter Human Use" in the galleys and lavatories; and other feasible measures that reduce or eliminate the need to use the aircraft water system during the limited period before public use of the aircraft water system is unrestricted.

(e) *Post disinfection and flushing follow-up sampling.* Following corrective action disinfection and flushing, air carriers must comply with post disinfection and flushing follow-up sampling procedures that, at a minimum, consist of the following:

(1) For each aircraft water system, the air carrier must collect a complete set of total coliform follow-up samples consisting of two 100 mL total coliform samples at the same routine sample locations as identified in paragraphs (b)(2) and (b)(4) of this section.

(2) Follow-up samples must be collected prior to providing water to the public for human consumption from the aircraft water system.

(3) If a complete set of follow-up samples is total coliform-negative, the air carrier must return to the routine monitoring frequency for total coliform as specified in the sampling plan required by § 141.802.

(4) If any follow-up sample is *E. coli* -positive, the air carrier must perform all the corrective actions as specified in paragraphs (c)(2)(i), (c)(2)(ii), and (c)(2)(iii) of this section.

(5) If any follow-up sample is total coliform-positive and *E. coli* -negative the air carrier must restrict public access to the aircraft water system in accordance with paragraph (d) of this section as expeditiously as possible, but in no case later than 72 hours after the laboratory notifies the air carrier of the total coliform-positive and *E. coli* -negative result. All public access restrictions, including applicable public notification requirements, must remain in-place until the aircraft water system has been disinfected and flushed in accordance with § 141.804(b)(2) and a complete set of follow-up samples is total coliform-negative. The air carrier must collect follow-up samples in accordance with paragraph (e) of this section. A complete set of follow-up sample results must be total coliform-negative before the air carrier provides water for human consumption from the aircraft water system and returns to the routine monitoring frequency for coliform as specified in § 141.802.

(f) *Failure to perform required routine disinfection and flushing or failure to collect required routine samples.* If the air carrier fails to perform routine disinfection and flushing or fails to collect and analyze

the required number of routine coliform samples, the air carrier must perform all the corrective actions as specified in paragraph (c)(3)(ii) of this section.

(g) *Failure to collect repeat or follow-up samples.* If the air carrier fails to collect and analyze the required follow-up samples as a result of an *E. coli* -positive result, then the air carrier must perform all the corrective actions as specified in paragraphs (c)(2)(i), (c)(2)(ii), and (c)(2)(iii) of this section. If the air carrier fails to collect and analyze the required repeat samples or follow-up samples as a result of a total coliform-positive and *E. coli* -negative result, then the air carrier must perform all the corrective actions as specified in paragraph (c)(3)(ii) of this section.

(h) *Failure to board water from a safe watering point (E. coli-positive).* For the aircraft water system, the air carrier must perform all the corrective actions specified in paragraphs (c)(2)(i), (c)(2)(ii), and (c)(2)(iii) of this section when it becomes aware of an *E. coli* -positive event resulting from:

(1) Boarding water from a watering point not in accordance with FDA regulations (21 CFR part 1240 subpart E), or

(2) Boarding water that does not meet NPDWRs applicable to transient non-community water systems (§§ 141.62 and 141.63, as applied to TNCWS),

(3) Boarding water that is otherwise determined to be unsafe due to non-compliance with the procedures specified in § 141.804(b)(6).

(i) *Failure to board water from a safe watering point (non-E. coli-positive).* For the aircraft water system, the air carrier must perform all the corrective actions specified in paragraphs (c)(3)(ii) of this section when it becomes aware of a non- *E. coli* -positive event resulting from:

(1) Boarding water from a watering point not in accordance with FDA regulations (21 CFR part 1240, subpart E),

(2) Boarding water that does not meet NPDWRs applicable to transient non-community water systems (§§ 141.62 and 141.63, as applied to TNCWS), or

(3) Boarding water that is otherwise determined to be unsafe due to non-compliance with the procedures specified in § 141.804(b)(6).

[74 FR 53618, Oct. 19, 2009, as amended at 78 FR 10354, Feb. 13, 2013]

§ 141.804 Aircraft water system operations and maintenance plan.

(a) Each air carrier must develop and implement an aircraft water system operations and maintenance plan for each aircraft water system that it owns or operates. This plan must be included in a Federal Aviation Administration (FAA)-accepted air carrier operations and maintenance program (14 CFR part 43, 14 CFR part 91, 14 CFR part 121).

(b) Each aircraft water system operations and maintenance plan must include the following:

(1) *Watering point selection requirement.* All watering points must be selected in accordance with Food and Drug Administration (FDA) regulations (21 CFR part 1240, subpart E).

(2) *Procedures for disinfection and flushing.* The plan must include the following requirements for procedures for disinfection and flushing of aircraft water system.

(i) The air carrier must conduct disinfection and flushing of the aircraft water system in accordance with, or is consistent with, the water system manufacturer's recommendations. The air carrier may conduct disinfection and flushing more frequently, but not less frequently, than the manufacturer recommends.

(ii) The operations and maintenance plan must identify the disinfection frequency, type of disinfecting agent, disinfectant concentration to be used, and the disinfectant contact time, and flushing volume or flushing time.

(iii) In cases where a recommended routine disinfection and flushing frequency is not specified by the aircraft water system manufacturer, the air carrier must choose a disinfection and flushing, and corresponding monitoring frequency specified in § 141.803(b)(3).

(3) *Follow-up sampling.* The plan must include the procedures for follow-up sampling in accordance with § 141.803(e).

(4) *Training requirements.* Training for all personnel involved with the aircraft water system operation and maintenance provisions of this regulation must include, but is not limited to the following:

- (i) Boarding water procedures;
- (ii) Sample collection procedures;
- (iii) Disinfection and flushing procedures;
- (iv) Public health and safety reasons for the requirements of this subpart.

(5) *Procedures for conducting self-inspections of the aircraft water system.* Procedures must include, but are not limited to, inspection of storage tank, distribution system, supplemental treatment, fixtures, valves, and backflow prevention devices.

(6) *Procedures for boarding water.* The plan must include the following requirements and procedures for boarding water:

(i) Within the United States, the air carrier must board water from watering points in accordance with Food and Drug Administration (FDA) regulations (21 CFR part 1240, subpart E).

(ii) A description of how the water will be transferred from the watering point to the aircraft in a manner that ensures it will not become contaminated during the transfer.

(iii) A description of how the carrier will ensure that water boarded outside the United States is safe for human consumption.

(iv) A description of emergency procedures that meet the requirements in § 141.803(h) and (i) that must be used in the event that the air carrier becomes aware that water was boarded to operate essential systems, such as toilets, but was boarded from a watering point not in accordance with FDA regulations, does not meet NPDWRs applicable to transient non-community water systems (§§ 141.62 and 141.63, as applied to TNCWSs), or is otherwise unsafe.

(7) *Coliform sampling plan.* The air carrier must include the coliform sampling plan prepared in accordance with § 141.802.

(8) *Aircraft water system disconnect/shut-off, or prevent flow of water through the tap(s) statement.* An explanation of whether the aircraft water system can be physically disconnected/shut-off, or the flow of water otherwise prevented through the tap(s) to the crew and passengers.

(c) For existing aircraft, the air carrier must develop the water system operations and maintenance plan required by this section by April 19, 2011;

(d) For new aircraft, the air carrier must develop the operations and maintenance plan required in this section within the first calendar quarter of initial operation of the aircraft.

(e) Any changes to the aircraft water system operations and maintenance plan must be included in the FAA-accepted air carrier operations and maintenance program.

§ 141.805 Notification to passengers and crew.

(a) Air carriers must give public notice for each aircraft in all of the following situations:

(1) Public access to the aircraft water system is restricted in response to a routine, repeat or follow-up total coliform-positive or *E. coli* -positive sample result in accordance with § 141.803(d);

(2) Failure to perform required routine disinfection and flushing or failure to collect required routine samples in accordance with § 141.803(f);

(3) Failure to collect the required follow-up samples in response to a sample result that is *E. coli* -positive in accordance with § 141.803(g);

(4) Failure to collect the required repeat samples or failure to collect the required follow-up samples in response to a sample result that is total coliform-positive and *E. coli* -negative in accordance with § 141.803(g);

(5) In accordance with § 141.803(h), the air carrier becomes aware of an *E. coli* -positive event resulting from water that has been boarded from a watering point not in accordance with FDA regulations (21 CFR part 1240, subpart E), or that does not meet NPDWRs applicable to transient non-community water systems, or that is otherwise determined to be unsafe due to non-compliance with the procedures specified in § 141.804(b)(6);

(6) In accordance with § 141.803(i), the air carrier becomes aware of a non- *E. coli* -positive event resulting from water that has been boarded from a watering point not in accordance with FDA regulations (21 CFR part 1240, subpart E), or that does not meet NPDWRs applicable to transient non-community water systems, or that is otherwise determined to be unsafe due to non-compliance with the procedures specified in § 141.804(b)(6).

(7) The Administrator, the carrier, or the crew otherwise determines that notification is necessary to protect public health.

(b) *Public notification:* (1) Must be displayed in a conspicuous way when printed or posted;

(2) Must not contain overly technical language or very small print;

(3) Must not be formatted in a way that defeats the purpose of the notice;

(4) Must not contain language that nullifies the purpose of the notice;

(5) Must contain information in the appropriate language(s) regarding the importance of the notice, reflecting a good faith effort to reach the non-English speaking population served, including, where applicable, an easily recognized symbol for non-potable water.

(c) Public notification for paragraph (a)(1) of this section must meet the requirements of paragraph (b) of this section in addition to the following:

(1) Public notification must include a prominently displayed, clear statement in each lavatory indicating that the water is non-potable and should not be used for drinking, food or beverage preparation, hand washing, teeth brushing, or any other consumptive use; and

(2) A prominent notice in the galley directed at the crew which includes:

(i) A clear statement that the water is non-potable and should not be used for drinking, food or beverage preparation, hand washing, teeth brushing, or any other consumptive use;

(ii) A description of the violation or situation triggering the notice, including the contaminant(s) of concern;

(iii) When the violation or situation occurred;

(iv) Any potential adverse health effects from the violation or situation, as appropriate, under paragraph (g) of this section;

(v) The population at risk, including sensitive subpopulations particularly vulnerable if exposed to the contaminant in the drinking water;

(vi) What the air carrier is doing to correct the violation or situation; and

(vii) When the air carrier expects to return the system to unrestricted public access.

(3) If passenger access to the water system is physically prevented through disconnecting or shutting off the water, or the flow of water prevented through the tap(s), or if water is supplied only to lavatory toilets, and not to any lavatory or galley taps, then only the notice specified in paragraph (c)(2) of this section is required.

(4) Air carriers must initiate public notification when restriction of public access is initiated in accordance with § 141.803(d) and must continue until the aircraft water system is returned to unrestricted public access.

(d) Public notification for paragraphs (a)(2), (a)(4), and (a)(6) of this section must meet the requirements of paragraph (b) of this section in addition to the following:

(1) Public notification must include a prominently displayed, clear statement in each lavatory indicating that the water is non-potable and should not be used for drinking, food or beverage preparation, hand washing, teeth brushing, or any other consumptive use; and

(2) A prominent notice in the galley directed at the crew which includes:

(i) A clear statement that the water is non-potable and should not be used for drinking, food or beverage preparation, hand washing, teeth brushing, or any other consumptive use;

(ii) A clear statement that it is not known whether the water is contaminated because there was a failure to perform required routine disinfection and flushing; or a failure to perform required monitoring; or water was boarded from a watering point not in accordance with FDA regulations, or that does not meet NPDWRs applicable to transient noncommunity water systems, or that is otherwise determined to be unsafe due to noncompliance with the procedures specified in § 141.804(b)(6);

(iii) When and where the unsafe water was boarded or when the specific monitoring or disinfection and flushing requirement was not met;

(iv) Any potential adverse health effects from exposure to waterborne pathogens that might be in the water, as appropriate, under paragraph (g) of this section;

(v) The population at risk, including sensitive subpopulations particularly vulnerable if exposed to the contaminant in the drinking water; and

(vi) A statement indicating when the system will be disinfected and flushed and returned to unrestricted public access.

(3) If passenger access to the water system is physically prevented through disconnecting or shutting off the water, or the flow of water prevented through the tap(s), or if water is supplied only to lavatory toilets, and not to any lavatory or galley taps, then only the notice specified in paragraph (d)(2) of this section is required.

(4) Air carriers must initiate public notification when restriction of public access is initiated in accordance with § 141.803(d) and must continue until the aircraft water system is returned to unrestricted public access.

(e) Public notification for paragraphs (a)(3) and (a)(5) of this section must meet the requirements of paragraph (b) of this section in addition to the following:

(1) Public notification must include a prominently displayed, clear statement in each lavatory indicating that the water is non-potable and should not be used for drinking, food or beverage preparation, hand washing, teeth brushing, or any other consumptive use; and

(2) A prominent notice in the galley directed at the crew which includes:

(i) A clear statement that the water is non-potable and should not be used for drinking, food or beverage preparation, hand washing, teeth brushing, or any other consumptive use;

(ii) A clear statement that the water is contaminated and there was a failure to conduct required monitoring; or a clear statement that water is contaminated because water was boarded from a watering point not in accordance with FDA regulations, or that does not meet NPDWRs applicable to transient noncommunity water systems, or that is otherwise determined to be unsafe due to noncompliance with the procedures specified in § 141.804(b)(6);

(iii) A description of the contaminant(s) of concern;

(iv) When and where the unsafe water was boarded or when the specific monitoring requirement was not met;

(v) Any potential adverse health effects from the situation, as appropriate, under paragraph (g) of this section;

(vi) The population at risk, including sensitive subpopulations particularly vulnerable if exposed to the contaminant in the drinking water;

(vii) A statement indicating what the air carrier is doing to correct the situation; and

(viii) When the air carrier expects to return the system to unrestricted public access.

(3) If passenger access to the water system is physically prevented through disconnecting or shutting off the water, or the flow of water prevented through the tap(s), or if water is supplied only to lavatory toilets, and not to any lavatory or galley taps, then only the notice specified in paragraph (e)(2) of this section is required.

(4) Air carriers must initiate public notification when restriction of public access is initiated in accordance with § 141.803(d) and must continue public notification until a complete set of required follow-up samples are total coliform-negative.

(f) Public notification for paragraph (a)(7) of this section must meet the requirements of paragraph (b) of this section in addition to the following:

(1) Notification must be in a form and manner reasonably calculated to reach all passengers and crew while on board the aircraft by using one or more of the following forms of delivery:

(i) Broadcast over public announcement system on aircraft;

(ii) Posting of the notice in conspicuous locations throughout the area served by the water system. These locations would normally be the galleys and in the lavatories of each aircraft requiring posting;

(iii) Hand delivery of the notice to passengers and crew;

(iv) Another delivery method approved in writing by the Administrator.

(2) Air carriers must initiate public notification within 24 hours of being informed by EPA to perform notification and must continue notification for the duration determined by EPA.

(g) In each public notice to the crew, air carriers must use the following standard health effects language that corresponds to the situations in paragraphs (a)(1) through (a)(6) of this section.

(1) Health effects language to be used when public notice is initiated due to the detection of total coliforms only (not *E. coli*) in accordance with paragraph (a)(1) of this section:

Coliform are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present. Coliforms were found in [INSERT NUMBER OF SAMPLES DETECTED] samples collected and this is a warning of potential problems. If human pathogens are present, they can cause short-term health effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.

(2) Health effects language to be used when public notice is initiated due to any *E. coli*-positive routine, repeat, or follow-up sample in accordance with paragraph (a)(1) of this section:

E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term health effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.

(3) Health effects language to be used when public notice is initiated due to a failure to conduct routine monitoring or routine disinfection and flushing in accordance with paragraph (a)(2) of this section; or when there is a failure to conduct repeat or follow-up sampling in accordance with paragraph (a)(4) of this section; or in accordance with paragraph (a)(6) of this section, when the air carrier becomes aware of a non-*E. coli*-positive event that is the result of water that was boarded from a watering point not in accordance with FDA regulations (21 CFR part 1240, subpart E), or that does not meet NPDWRs applicable to transient non-community water systems, or that is otherwise determined to be unsafe due to non-compliance with the procedures specified in § 141.804(b)(6):

Because [REQUIRED MONITORING AND ANALYSIS WAS NOT CONDUCTED], [REQUIRED DISINFECTION AND FLUSHING WAS NOT CONDUCTED] [WATER WAS BOARDED FROM A WATERING POINT NOT IN ACCORDANCE WITH FDA REGULATIONS (21 CR 1240 SUBPART E)], or [OTHER APPROPRIATE EXPLANATION], we cannot be sure of the quality of the drinking water at this time. However, drinking water contaminated with human pathogens can cause short-term health effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.

(4) Health effects language to be used when public notice is initiated due to a failure to conduct required follow-up monitoring in response to a sample result that is *E. coli*-positive in accordance with paragraph (a)(3) of this section; or in accordance with paragraph (a)(5) of this section, when the air carrier becomes aware of an *E. coli*-positive event that is the result of water that was boarded from a watering point not in accordance with FDA regulations (21 CFR part 1240, subpart E), or that does not meet NPDWRs applicable to transient non-community water systems, or that is otherwise determined to be unsafe due to non-compliance with the procedures specified in § 141.804(b)(6):

Because required follow-up monitoring and analysis was not conducted after the aircraft water system tested positive for *E. coli*, we cannot be sure of the quality of the drinking water at this time. *E. coli* are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term health effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.

OR

Water was boarded that is contaminated with *E. coli* because [WATER WAS BOARDED FROM A WATERING POINT NOT IN ACCORDANCE WITH FDA REGULATIONS (21 CR 1240 SUBPART E)], or [OTHER APPROPRIATE EXPLANATION]. *E. coli* are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term health effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.

§ 141.806 Reporting requirements.

(a) The air carrier must comply with the following requirements regarding reporting of the development of the coliform sampling plan, the operations and maintenance plan, and the disinfection and flushing and coliform sampling frequencies.

(1) The air carrier must report to the Administrator that it has developed the coliform sampling plan required by § 141.802, which covers each existing aircraft water system, as well as report the frequency for routine coliform sampling identified in the coliform sampling plan by April 19, 2011. The air carrier must report to the Administrator that it has developed its operations and maintenance plan required by § 141.804 and report the frequency for routine disinfection and flushing by April 19, 2011;

(2) For each new aircraft meeting the definition of an aircraft water system, which becomes operational after publication of this subpart, the air carrier must report to the Administrator that it has developed the coliform sampling plan required by § 141.802, as well as report the frequency for routine coliform sampling identified in the coliform sampling plan, within the first calendar quarter of initial operation of the aircraft. The air carrier must report to the Administrator that it has developed the aircraft water system operations and maintenance plan required by § 141.804, and report the frequency for routine disinfection and flushing within the first calendar quarter of initial operation of the aircraft.

(b) The air carrier must report the following information to the Administrator:

(1) A complete inventory of aircraft that are public water systems by April 19, 2011. Inventory information includes, at a minimum, the following:

(i) The unique aircraft identifier number;

(ii) The status (active or inactive) of any aircraft as an aircraft water system as defined in § 141.801;

(iii) The type and location of any supplemental treatment equipment installed on the water system; and

(iv) Whether the aircraft water system can be physically disconnected or shut-off, or the flow of water prevented through the tap(s).

(2) Changes in aircraft inventory no later than 10 days following the calendar month in which the change occurred. Changes in inventory information include, at a minimum, the following:

(i) Change in the unique identifier number for any new aircraft, or any aircraft removed from the carrier's fleet;

(ii) Change in status (active or inactive) of any aircraft as an aircraft water system as defined in § 141.801; and

(iii) Change to the type and location of any supplemental treatment equipment added to or removed from the water system.

(iv) Change to whether the aircraft water system can be physically disconnected or shut-off, or the flow of water prevented through the tap(s).

(3) All sampling results no later than 10 calendar days following the monitoring period in which the sampling occurred. The monitoring period is based on the monitoring frequency identified in the coliform sampling plan required under § 141.802. Routine disinfection and flushing events must be reported no later than 10 calendar days following the disinfection and flushing period in which the disinfection and flushing occurred. The disinfection and flushing period is based on the frequency identified in the operations and maintenance plan required under § 141.804.

(4) All events requiring notification to passengers or crew, or non-routine disinfection and flushing, or non-routine sampling, within 10 days of the event (e.g., notification of positive sample result by laboratory), including information on whether required notification was provided to passengers or crew or both.

(5) Failure to comply with the monitoring or disinfection and flushing requirements of this subpart within 10 calendar days of discovery of the failure.

(6) Changes in disinfection and flushing and coliform sampling frequencies no later than 10 days following the calendar month in which the change occurred. Changes to an aircraft's routine coliform sampling frequency and routine disinfection and flushing frequency must be included in the aircraft water system operation and maintenance plan that is included in the air carrier operations and maintenance program accepted by FAA in accordance with § 141.804.

(c) The air carrier must provide evidence of a self-inspection to the Administrator within 90 days of completion of the self-inspection required under § 141.808(b), including reporting whether all deficiencies were addressed in accordance with § 141.808(c). The air carrier must also report to the Administrator within 90 days that any deficiency identified during a compliance audit conducted in accordance with § 141.808(a) has been addressed. If any deficiency has not been addressed within 90 days of identification of the deficiency, the report must also include a description of the deficiency, an explanation as to why it has not yet been addressed, and a schedule for addressing it as expeditiously as possible.

(d) All information required to be reported to the Administrator under this subpart must be in an electronic format established or approved by the Administrator. If an air carrier is unable to report electronically, the air carrier may use an alternative approach that the Administrator approves.

§ 141.807 Recordkeeping requirements.

(a) The air carrier must keep records of bacteriological analyses for at least 5 years and must include the following information:

- (1) The date, time, and place of sampling, and the name of the person who collected the sample;
- (2) Identification of the sample as a routine, repeat, follow-up, or other special purpose sample;
- (3) Date of the analysis;
- (4) Laboratory and person responsible for performing the analysis;
- (5) The analytical technique/method used; and
- (6) The results of the analysis.

(b) The air carrier must keep records of any disinfection and flushing for at least 5 years and must include the following information:

- (1) The date and time of the disinfection and flushing; and
- (2) The type of disinfection and flushing (*i.e.* , routine or corrective action).

(c) The air carrier must keep records of a self-inspection for at least 10 years and must include the following information:

- (1) The completion date of the self-inspection; and
- (2) Copies of any written reports, summaries, or communications related to the self-inspection.

(d) The air carrier must maintain sampling plans and make such plans available for review by the Administrator upon request, including during compliance audits.

(e) The air carrier must maintain aircraft water system operations and maintenance plans in accordance with FAA requirements, and make such plans available for review by the Administrator upon request, including during compliance audits.

(f) The air carrier must keep copies of public notices to passengers and crew issued as required by this subpart for at least 3 years after issuance.

§ 141.808 Audits and inspections.

(a) The Administrator may conduct routine compliance audits as deemed necessary in providing regulatory oversight to ensure proper implementation of the requirements in this subpart. Compliance audits may include, but are not limited to:

- (1) Bacteriological sampling of aircraft water system;
 - (2) Reviews and audits of records as they pertain to water system operations and maintenance such as log entries, disinfection and flushing procedures, and sampling results; and
 - (3) Observation of procedures involving the handling of finished water, watering point selection, boarding of water, operation, disinfection and flushing, and general maintenance and self-inspections of aircraft water system.
- (b) Air carriers or their representatives must perform a self-inspection of all water system components for each aircraft water system no less frequently than once every 5 years.
- (c) The air carrier must address any deficiency identified during compliance audits or routine self-inspections within 90 days of identification of the deficiency, or where such deficiency is identified during extended or heavy maintenance, before the aircraft is put back into service. This includes any deficiency in the water system's design, construction, operation, maintenance, or administration, as well as any failure or malfunction of any system component that has the potential to cause an unacceptable risk to health or that could affect the reliable delivery of safe drinking water.

§ 141.809 Supplemental treatment.

(a) Any supplemental drinking water treatment units installed onboard existing or new aircraft must be acceptable to FAA and FDA; and must be installed, operated, and maintained in accordance with the manufacturer's plans and specifications and FAA requirements.

(b) Water supplemental treatment and production equipment must produce water that meets the standards prescribed in this part.

§ 141.810 Violations.

An air carrier is in violation of this subpart when, for any aircraft water system it owns or operates, any of the following occur:

- (a) It fails to perform any of the requirements in accordance with § 141.803 or § 141.804.
- (b) It has an *E. coli* -positive sample in any monitoring period (routine and repeat samples are used in this determination).
- (c) It fails to provide notification to passengers and crew in accordance with § 141.805.
- (d) It fails to comply with the reporting and recordkeeping requirements of this subpart.
- (e) It fails to conduct a self-inspection or address a deficiency in accordance with § 141.808.
- (f) It fails to develop a coliform sampling plan in accordance with § 141.802, or fails to have and follow an operations and maintenance plan, which is included in a FAA accepted program in accordance with § 141.804.

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Violations Table for Republic Airways Holdings

FAA Corporate Name	PWS No	FAA Registry No	Violation No	Violation Begin Date	Violation End Date	Violation Details	Status: April 2013
REPUBLIC AIRLINES INC	AC0001839	N187WQ	12033	10/1/2012	1/10/2013	Treatment Technique violation for failure to perform fourth quarter 2012 routine D&F.	Issue NOV - Complete Corrective Action under 40 C.F.R. § 141.803(c)(3)(ii)
REPUBLIC AIRLINES INC	AC0001839	N187WQ	12034	12/31/2012	1/10/2013	Treatment Technique violation for failure to perform corrective D&F, and taking Follow-up samples as a result of the failure to perform routine D&F for fourth quarter 2012.	Issue NOV - Complete Corrective Action under 40 C.F.R. § 141.803(c)(3)(ii)
REPUBLIC AIRLINES INC	AC0001840	N188WQ	12058	1/1/2012	1/10/2013	Monitoring Violation for failure to collect annual Routine Coliform Sample for 2012.	Issue NOV - Complete Corrective Action under 40 C.F.R. § 141.803(c)(3)(ii)
REPUBLIC AIRLINES INC	AC0001840	N188WQ	12059	12/31/2012	1/10/2013	Treatment Technique violation for failure to perform corrective Disinfection and Flushing, and taking Follow-up samples as a result of the failure to collect the annual routine Coliform samples in 2012.	Issue NOV - Complete Corrective Action under 40 C.F.R. § 141.803(c)(3)(ii)
REPUBLIC AIRLINES INC	AC0001854	N328NG	11030	7/1/2012	10/19/2012	Treatment Technique violation for failure to perform third quarter 2012 routine Disinfection and Flushing (D&F).	Issue NOV - Complete Corrective Action under 40 C.F.R. § 141.803(c)(3)(ii)
REPUBLIC AIRLINES INC	AC0001854	N328NG	11271	10/4/2012	10/19/2012	Treatment Technique violation for failure to perform corrective D&F, and taking Follow-up samples as a result of the failure to perform routine D&F for third quarter 2012.	Issue NOV - Complete Corrective Action under 40 C.F.R. § 141.803(c)(3)(ii)

Violations Table for Republic Airways Holdings

FAA Corporate Name	PWS No	FAA Registry No	Violation No	Violation Begin Date	Violation End Date	Violation Details	Status: April 2013
REPUBLIC AIRLINES INC	AC0001859	N339NG	12063	1/1/2012	1/10/2013	Monitoring Violation for failure to collect annual Routine Coliform Sample for 2012.	Issue NOV - Complete Corrective Action under 40 C.F.R. § 141.803(c)(3)(ii)
REPUBLIC AIRLINES INC	AC0001859	N339NG	12064	12/31/2012	1/10/2013	Treatment Technique violation for failure to perform corrective Disinfection and Flushing, and taking Follow-up samples as a result of the failure to collect the annual routine Coliform samples in 2012.	Issue NOV - Complete Corrective Action under 40 C.F.R. § 141.803(c)(3)(ii)
REPUBLIC AIRLINES INC	AC0001860	N34NG	11890	12/2/2012	12/13/2012	Treatment Technique violation for failure to perform corrective action in response to a total Coliform positive sample.	Issue NOV - Complete Corrective Action under 40 C.F.R. § 141.803(c)(3)(ii)
REPUBLIC AIRLINES INC	AC0001964	N285SK	11775	12/31/2012	12/10/2012	Treatment Technique violation for failure to perform corrective action in response to a total Coliform positive sample.	Issue NOV - Complete Corrective Action under 40 C.F.R. § 141.803(c)(3)(ii)
REPUBLIC AIRLINES INC	AC0001972	N272SK	10310	8/20/2012	9/18/2012	Treatment Technique violation for failure to perform corrective action in response to a total Coliform positive sample.	Issue NOV - Complete Corrective Action under 40 C.F.R. § 141.803(c)(3)(ii)
REPUBLIC AIRLINES INC	AC0002100	N938FR	11751	11/18/2012	11/19/2012	Treatment Technique violation for failure to perform corrective action in response to a total Coliform positive sample.	Issue NOV - Complete Corrective Action under 40 C.F.R. § 141.803(c)(3)(ii)

Violations Table for Republic Airways Holdings

FAA Corporate Name	PWS No	FAA Registry No	Violation No	Violation Begin Date	Violation End Date	Violation Details	Status: April 2013
REPUBLIC AIRLINES INC	AC0002120	N204FR	11811	12/31/2012	12/13/2012	Treatment Technique violation for failure to perform corrective action in response to a total Coliform positive sample.	Issue NOV - Complete Corrective Action under 40 C.F.R. § 141.803(c)(3)(ii)
CHAUTAUQUA AIRLINES INC	AC0002243	N127HQ	12068	1/1/2012	1/10/2013	Monitoring Violation for failure to collect annual Routine Coliform Sample for 2012.	Issue NOV - Complete Corrective Action under 40 C.F.R. § 141.803(c)(3)(ii)
CHAUTAUQUA AIRLINES INC	AC0002243	N127HQ	12069	12/31/2012	1/10/2013	Treatment Technique violation for failure to perform corrective Disinfection and Flushing, and taking Follow-up samples as a result of the failure to collect the annual routine Coliform samples in 2012.	Issue NOV - Complete Corrective Action under 40 C.F.R. § 141.803(c)(3)(ii)
CHAUTAUQUA AIRLINES INC	AC0002249	N133HQ	12073	1/1/2012	1/10/2013	Monitoring Violation for failure to collect annual Routine Coliform Sample for 2012.	Issue NOV - Complete Corrective Action under 40 C.F.R. § 141.803(c)(3)(ii)
CHAUTAUQUA AIRLINES INC	AC0002249	N133HQ	12074	12/31/2012	1/10/2013	Treatment Technique violation for failure to perform corrective Disinfection and Flushing, and taking Follow-up samples as a result of the failure to collect the annual routine Coliform samples in 2012.	Issue NOV - Complete Corrective Action under 40 C.F.R. § 141.803(c)(3)(ii)
CHAUTAUQUA AIRLINES INC	AC0002257	N163HQ	12038	10/1/2012	1/10/2013	Treatment Technique violation for failure to perform third quarter 2012 routine Disinfection and Flushing (D&F).	Issue NOV - Complete Corrective Action under 40 C.F.R. § 141.803(c)(3)(ii)

Violations Table for Republic Airways Holdings

FAA Corporate Name	PWS No	FAA Registry No	Violation No	Violation Begin Date	Violation End Date	Violation Details	Status: April 2013
CHAUTAUQUA AIRLINES INC	AC0002257	N163HQ	12039	12/31/2012	1/10/2013	Treatment Technique violation for failure to perform corrective D&F, and taking Follow-up samples as a result of the failure to perform routine D&F for third quarter 2012.	Issue NOV - Complete Corrective Action under 40 C.F.R. § 141.803(c)(3)(ii)
CHAUTAUQUA AIRLINES INC	AC0002258	N164HQ	12078	1/1/2012	1/10/2013	Monitoring Violation for failure to collect annual Routine Coliform Sample for 2012.	Issue NOV - Complete Corrective Action under 40 C.F.R. § 141.803(c)(3)(ii)
CHAUTAUQUA AIRLINES INC	AC0002258	N164HQ	12079	12/31/2012	1/10/2013	Treatment Technique violation for failure to perform corrective Disinfection and Flushing, and taking Follow-up samples as a result of the failure to collect the annual routine Coliform samples in 2012.	Issue NOV - Complete Corrective Action under 40 C.F.R. § 141.803(c)(3)(ii)
CHAUTAUQUA AIRLINES INC	AC0002259	N165HQ	12043	10/1/2012	1/10/2013	Treatment Technique violation for failure to perform third quarter 2012 routine Disinfection and Flushing (D&F).	Issue NOV - Complete Corrective Action under 40 C.F.R. § 141.803(c)(3)(ii)
CHAUTAUQUA AIRLINES INC	AC0002259	N165HQ	12044	12/31/2012	1/10/2013	Treatment Technique violation for failure to perform corrective D&F, and taking Follow-up samples as a result of the failure to perform routine D&F for third quarter 2012.	Issue NOV - Complete Corrective Action under 40 C.F.R. § 141.803(c)(3)(ii)
CHAUTAUQUA AIRLINES INC	AC0002261	N167HQ	12048	10/1/2012	1/10/2013	Treatment Technique violation for failure to perform third quarter 2012 routine D&F.	Issue NOV - Complete Corrective Action under 40 C.F.R. § 141.803(c)(3)(ii)

Violations Table for Republic Airways Holdings

FAA Corporate Name	PWS No	FAA Registry No	Violation No	Violation Begin Date	Violation End Date	Violation Details	Status: April 2013
SHUTTLE AMERICA CORPORATION	AC0002261	N167HQ	12049	12/31/2012	1/10/2013	Treatment Technique violation for failure to perform corrective D&F, and taking Follow-up samples as a result of the failure to perform routine D&F for third quarter 2012.	Issue NOV - Complete Corrective Action under 40 C.F.R. § 141.803(c)(3)(ii)
SHUTTLE AMERICA CORPORATION	AC0002261	N167HQ	12083	1/1/2012	1/10/2013	Monitoring Violation for failure to collect annual Routine Coliform Sample for 2012.	Issue NOV - Complete Corrective Action under 40 C.F.R. § 141.803(c)(3)(ii)
FRONTIER AIRLINES INC	AC0002261	N167HQ	12084	12/31/2012	1/10/2013	Treatment Technique violation for failure to perform corrective Disinfection and Flushing (D&F), and taking Follow-up samples as a result of the failure to collect the annual routine Coliform samples in 2012.	Issue NOV - Complete Corrective Action under 40 C.F.R. § 141.803(c)(3)(ii)
FRONTIER AIRLINES INC	AC0002282	N813MA	12088	1/1/2012	1/10/2013	Monitoring Violation for failure to collect annual Routine Coliform Sample for 2012.	Issue NOV - Complete Corrective Action under 40 C.F.R. § 141.803(c)(3)(ii)
FRONTIER AIRLINES INC	AC0002282	N813MA	12089	12/31/2012	1/10/2012	Treatment Technique violation for failure to perform corrective Disinfection and Flushing, and taking Follow-up samples as a result of the failure to collect the annual routine Coliform samples in 2012.	Issue NOV - Complete Corrective Action under 40 C.F.R. § 141.803(c)(3)(ii)
FRONTIER AIRLINES INC	AC0002288	N819MD	12093	1/1/2012	1/10/2013	Monitoring Violation for failure to collect annual Routine Coliform Sample for 2012.	Issue NOV - Complete Corrective Action under 40 C.F.R. § 141.803(c)(3)(ii)

Violations Table for Republic Airways Holdings

FAA Corporate Name	PWS No	FAA Registry No	Violation No	Violation Begin Date	Violation End Date	Violation Details	Status: April 2013
FRONTIER AIRLINES INC	AC0002288	N819MD	12094	12/31/2012	1/10/2013	Treatment Technique violation for failure to perform corrective Disinfection and Flushing, and taking Follow-up samples as a result of the failure to collect the annual routine Coliform samples in 2012.	Issue NOV - Complete Corrective Action under 40 C.F.R. § 141.803(c)(3)(ii)
REPUBLIC AIRLINES INC	AC0002297	N829MD	12098	1/1/2012	1/10/2013	Monitoring Violation for failure to collect annual Routine Coliform Sample for 2012.	Issue NOV - Complete Corrective Action under 40 C.F.R. § 141.803(c)(3)(ii)
REPUBLIC AIRLINES INC	AC0002297	N829MD	12099	12/31/2012	1/10/2013	Treatment Technique violation for failure to perform corrective Disinfection and Flushing, and taking Follow-up samples as a result of the failure to collect the annual routine Coliform samples in 2012.	Issue NOV - Complete Corrective Action under 40 C.F.R. § 141.803(c)(3)(ii)
REPUBLIC AIRLINES INC	AC0005511	N502LX	12053	10/1/2012	1/10/2013	Treatment Technique violation for failure to perform third quarter 2012 routine D&F.	Issue NOV - Complete Corrective Action under 40 C.F.R. § 141.803(c)(3)(ii)
REPUBLIC AIRLINES INC	AC0005511	N502LX	12054	12/31/2012	1/10/2013	Treatment Technique violation for failure to perform corrective D&F, and taking Follow-up samples as a result of the failure to perform routine D&F for third quarter 2012.	Issue NOV - Complete Corrective Action under 40 C.F.R. § 141.803(c)(3)(ii)
REPUBLIC AIRLINES INC	AC0005511	N502LX	12103	1/1/2012	1/10/2013	Monitoring Violation for failure to collect annual Routine Coliform Sample for 2012.	Issue NOV - Complete Corrective Action under 40 C.F.R. § 141.803(c)(3)(ii)

Violations Table for Republic Airways Holdings

FAA Corporate Name	PWS No	FAA Registry No	Violation No	Violation Begin Date	Violation End Date	Violation Details	Status: April 2013
REPUBLIC AIRLINES INC	AC0005511	N502LX	12104	12/31/2012	1/10/2013	Treatment Technique violation for failure to perform corrective Disinfection and Flushing (D&F), and taking Follow-up samples as a result of the failure to collect the annual routine Coliform samples in 2012.	Issue NOV - Complete Corrective Action under 40 C.F.R. § 141.803(c)(3)(ii)
REPUBLIC AIRLINES INC	AC0001854	N328NG	11270	10/16/2012	10/26/2012	Failure to report corrective action D&F within 10 days on 10/26.	Violation returned to compliance.
REPUBLIC AIRLINES INC	AC0001855	N332NG	10610	9/25/2012	9/26/2012	Late reporting of a TC+, 11 days late, 9/26/2012.	Violation returned to compliance.
REPUBLIC AIRLINES INC	AC0001856	N333NG	12390	1/27/2013	2/6/2013	Reporting Violation, Failure to report Corrective action D&F, reporting due by 1/27/2013 reported on 2/6/2013.	Violation returned to compliance.
REPUBLIC AIRLINES INC	AC0001860	N34NG	11892	12/20/2012	12/28/2012	Reporting Violation, Failure to report Corrective action D&F, reporting due by 12/20/2012 reported on 12/28/2012.	Violation returned to compliance.
REPUBLIC AIRLINES INC	AC0001972	N272SK	10650	9/23/2012	9/27/2012	Failure to report corrective action D&F within 10 days. Reported on the 14th day, 9/27/2012.	Violation returned to compliance.
REPUBLIC AIRLINES INC	AC0001975	N276SK	11250	10/20/2012	10/24/2012	D&F reporting violation from 10/10/2012.	Violation returned to compliance.

Violations Table for Republic Airways Holdings

FAA Corporate Name	PWS No	FAA Registry No	Violation No	Violation Begin Date	Violation End Date	Violation Details	Status: April 2013
REPUBLIC AIRLINES INC	AC0001988	N572RP	10330	9/7/2012	9/14/2012	Failure to report corrective action D&F within 10 days. Reported on the 17th day, 9/14/2012.	Violation returned to compliance.
REPUBLIC AIRLINES INC	AC0001988	N572RP	10331	9/8/2012	9/14/2012	Failure to report corrective action follow-up sample results within 10 days. Reported on the 16th day, 9/14/2012.	Violation returned to compliance.
REPUBLIC AIRLINES INC	AC0001988	N572RP	10332	9/8/2012	9/14/2012	Failure to report corrective action follow-up sample results within 10 days. Reported on the 16th day, 9/14/2012.	Violation returned to compliance.
REPUBLIC AIRLINES INC	AC0001988	N572RP	10333	9/10/2012	9/14/2012	Failure to report corrective action follow-up sample results within 10 days. Reported on the 14th day, 9/14/2012.	Violation returned to compliance.
REPUBLIC AIRLINES INC	AC0001988	N572RP	10630	9/16/2012	9/27/2012	Failure to report corrective action D&F within 10 days. Reported on the 21st day, 9/27/2012.	Violation returned to compliance.
REPUBLIC AIRLINES INC	AC0001993	N577RP	11170	9/28/2012	10/17/2012	Corrective action D&F reporting violation from 9/18/2012 on 10/17/2012.	Violation returned to compliance.
REPUBLIC AIRLINES INC	AC0002010	N298SK	11010	9/19/2012	10/10/2012	D&F reporting violation from 9/9/2012.	Violation returned to compliance.
REPUBLIC AIRLINES INC	AC0002046	N644RW	11730	11/30/2012	12/6/2012	Reporting violation, D&F entered on 12/06/2012, was due by 11/30/2012.	Violation returned to compliance.

Violations Table for Republic Airways Holdings

FAA Corporate Name	PWS No	FAA Registry No	Violation No	Violation Begin Date	Violation End Date	Violation Details	Status: April 2013
REPUBLIC AIRLINES INC	AC0002046	N644RW	11731	12/2/2012	12/6/2012	Reporting violation, D&F entered on 12/06/2012, was due by 12/02/2012.	Violation returned to compliance.
REPUBLIC AIRLINES INC	AC0002100	N938FR	11710	11/22/2012	12/5/2012	Reporting violation, TC+ Lab results entered on 12/05/2012, was due by 11/22/2012.	Violation returned to compliance.
REPUBLIC AIRLINES INC	AC0002100	N938FR	11750	11/25/2012	12/7/2012	Reporting violation, D&F reporting due by 11/25/12, reported on 12/07/2012.	Violation returned to compliance.
REPUBLIC AIRLINES INC	AC0002120	N204FR	11810	2/9/2012	12/13/2012	Reporting violation, D&F reporting due by 2/09/12, reported on 12/13/2012.	Violation returned to compliance.
REPUBLIC AIRLINES INC	AC0005692	N510LX	11770	11/19/2012	12/10/2012	Reporting Violation, Failure to report Corrective action D&F, reporting due by 11/19/2012 reported on 12/10/2012.	Violation returned to compliance.
REPUBLIC AIRLINES INC	AC0005692	N510LX	11771	11/22/2012	12/10/2012	Reporting Violation, Failure to report follow-up sample result, reporting due by 11/22/2012 reported sample results on 12/10/2012.	Violation returned to compliance.
REPUBLIC AIRLINES INC	AC0005692	N510LX	11772	11/24/2012	12/10/2012	Reporting Violation, Failure to report Corrective action D&F, reporting due by 11/24/2012 reported on 12/10/2012.	Violation returned to compliance.

Violations Table for Republic Airways Holdings

FAA Corporate Name	PWS No	FAA Registry No	Violation No	Violation Begin Date	Violation End Date	Violation Details	Status: April 2013
REPUBLIC AIRLINES INC	AC0005692	N510LX	11773	11/26/2012	12/10/2012	Reporting Violation, Failure to report follow-up sample result, reporting due by 11/26/2012 reported sample results on 12/10/2012.	Violation returned to compliance.
REPUBLIC AIRLINES INC	AC0005692	N510LX	11774	12/7/2012	12/10/2012	Reporting Violation, Failure to report Corrective action D&F, reporting due by 12/7/2012 reported on 12/10/2012.	Violation returned to compliance.

US Environmental Protection Agency
Region 5 Compliance Assistance Visit with Republic Airways Holdings

Trip Report

I. Introduction:

Three people from EPA Region 5 , Michele Palmer, Dorothy Wormbly and Frank Lagunas, conducted an Aircraft Drinking Water Rule compliance assistance visit to Republic Airways Holdings during the week of November 26, 2012. The staff arrived around 2 p.m. on Tuesday, November 27 and finished the visit on the afternoon of Thursday, November 29. The visit site was at the corporate offices of Republic Airways Holdings in Indianapolis. The company has certificates for four airlines, Chautauqua, Shuttle America, Republic, and Frontier Airlines. EPA staff reviewed files from each of the airlines. In addition, we reviewed the Operations and Maintenance Plan (O&M) for each of the airlines and the training module for the maintenance staff.

II. Observations:

A. O&M Files

The O&M files were neat and in order. We had a few issues with them. According to Republic Airways staff the O&M plans were essentially the same for all four certificates, so we have commented on only one of them.

Recommendations:

- (1) On page 14 of the Republic O&M Plan, the last sentence of the last paragraph reads "The water system is expected to return to unrestricted public access within 24 hours after receipt of total *E. coli* negative results." This should say "... after receipt of total coliform negative results."
- (2) On page 15, section 15.20, the second bullet states "After disinfection, two (2) 100ml (2) samples will be collected from the same routine sample location as the original sample. The two samples must include the location where the initial positive sample(s) was collected, along with one other location on the aircraft." It should read "After disinfection and flushing (D&F) two (2) 100ml samples must be collected, one from a lavatory and one from a galley. If there is only one tap on an air craft then two (2) samples may be collected at that tap."

B. Training

We also reviewed Republic's training module which is a Microsoft PowerPoint presentation imbedded in their Hazcom document. Their training slides were good and we only noticed three issues.

Recommendations:

- (1) They need to include the health reasons for the ADWR, so that maintenance staff is aware of the importance of maintaining safe sanitary water aboard aircraft.
- (2) Slide 2 first bullet states that "if an aircraft misses a D&F, it may identify itself as inactive." This is inaccurate. It should state that an aircraft may be placed into inactive status in Aircraft Reporting and Compliance System (ARCS) if it is inactive, then D&F'd before it comes back into active status.
- (3) Samples should be drawn from the cold water tap. This should be stated explicitly in the training.

C. Aircraft Files

The files reviewed were neat and in order. We were able to find the laboratory and public notice data easily. The disinfection and flushing (D&F) data was a bit more difficult to locate in the files. It was not always easy to tell when the aircraft had been D&F'd because documentation was not always in the files. Overall we noticed a communication gap between operations and maintenance. Lab results and D&Fs were not always reported to the Environmental Compliance Manager in a timely manner so it could be entered into ARCS. Region 5 will inquire among some of the other airlines in other regions about their communications procedures between maintenance control and environmental compliance to see if there is some advice that could be helpful to Republic in managing their communications.

Recommendations:

- (1) D&F data need to be kept in the aircraft files.
- (2) Communications need to be improved between O&M staff and the Environmental Compliance Manager so information is entered into ARCS in a timely manner.

D. Aircraft Files Reviewed:

We reviewed Republic's records as required under 40 C.F.R. § 141.807 for a sampling of the aircraft public water systems (PWSs). Specifically, all bacteriological results, D&F event information, and public notices issued. The records for the following aircraft PWSs, which are identified by tail number, were reviewed:

Chautauqua: N272SK, N572RP, N577RP, N381SK

Shuttle America: N645RW, N859RW, N213JQ, N215JQ
Republic: N328NG, N332NG, N338NG, N168HQ
Frontier: N932FR, N263AV, N934FR, N803FR

All of the violations identified by our review of these files were found to be reflected in ARCS, however, not always in a timely manner.

1. Chautauqua Airlines:

Treatment Technique violation, failure to provide public notice on or before 8/20/2012 on aircraft **N272SK**. Corrective action performed on 9/6/2012, approximately 19 days after Lab notified Maintenance Control of a total coliform positive (TC+) result. A reporting violation was also assessed for failure to report a corrective action D&F on 9/13/2012 within ten days of completion, reporting done on 9/27/2012.

Reporting Violation, failure to report corrective action D&F within ten days of completion on aircraft **N577RP**. D&F completed on 9/9/2012 and reported on 10/17/2012. A second reporting violation was also assessed for failure to report lab results within ten days of receiving results; results were received on 9/26/2012 and reported on 10/17/2012.

Five Reporting Violations, for failure to report three corrective action D&Fs within ten days of completion of each. Failure to report two separate TC+ results within ten days of notification from lab. All reporting violations are assessed to aircraft **N332NG**. D&Fs were performed on 8/28/2012, 8/29/2012, and 9/6/2012 but were not reported until 9/14/2012 for the first two and 9/27/2012 for the last one conducted. Lab results were received on 8/29/2012 and 8/31/2012 for two different set of samples, but were not reported until 9/14/2012

2. Shuttle America Airlines

There were no issues with Shuttle America.

3. Republic Airlines:

We are going to reject the violations for late reporting for lab sampling and D&F on **N332NG** and **N168HQ**. We are rejecting **N168HQ** because the reporting for a D&F was one day late and this was near the beginning of the implementation of the rule back in 2/23/12. **N332NG** had a TC+ event on 9/15/12 then reported it one day late on 9/26/12, but the aircraft was D&F'd on 9/19/12 and public notice was posted on 9/17, within the 72 hour window that is required by the ADWR.

However, the violation stands for tail number **N328NG** which flew after it had a TC+, did not post public notice and did not D&F until 8 days later. The aircraft flew from 9/28/12 to 10/2/12 then was taken out of service on 10/2/12. It resumed flying from 10/4/12 to 10/6/12. It was then sanitized (D&F) on 10/6/12 and follow up samples were taken on 10/17/12 that came back TC-.

4. Frontier Airlines:

There were no issues with Frontier Airlines.

E. Other Issues:

1. Water Boarding

Republic Airways personnel were very concerned about the possibility of boarding unsafe water at the airports. They were also concerned about how well the airports would communicate with the airlines about water boil events and information that the water was not safe to drink. We told them that EPA is working on the communication strategy for PWSs communicating with the airlines so that airlines do not board unsafe water and get TC+ results.

2. Lab Communications

Lab results are communicated to Maintenance Control and then to the Environmental Compliance Manager, Russell Parks.

Recommendation:

- (1) Increased communication between Maintenance Control and Russell Parks will significantly decrease reporting violations. Once Russell Parks is informed that a TC+ or *E. coli* positive (EC+) event has occurred, verification on the part of Russell Parks must be confirmed with all personnel involved to ensure corrective action has been implemented and proper reporting can be accomplished in the required time frame.

3. Ozone Treatment

While studying training material and the water distribution system diagram it became clear that a potentially significant area, specifically the lines leading away from the potable water storage tank and the faucets are not receiving any kind of disinfection treatment using the ozonation treatment.

Recommendation:

- (1) A variation of procedure or secondary treatment for these lines will be necessary for compliance with the ADWR.

III. Conclusions:

Overall the visit went well. Files were arranged and in order so that we could get through them in an efficient manner. Discussions between EPA and Republic Airways staff were informative and productive. We however, continue to be concerned about the number of violations that these airlines continue to accrue. It is essential that rapid effective communication be maintained between maintenance control and Russell Parks. Additionally, we are concerned about the number of TC+s that the airlines have, both prior to and after Disinfecting and Flushing, and think that some problem solving needs to be done to reduce the number of positive sample results.

Appendix A

US Environmental Protection Agency Region 5 Compliance Assistance Visit with Republic Airways Holdings

8909 Purdue Road, Suite 300

Indianapolis, Indiana

November 27 – 29, 2012

Attendees:

Michele Palmer, ADWR Team Leader, US EPA
Dorothy Wormbly, ADWR Enforcement Officer, US EPA
Frank Lagunas, ADWR Enforcement Officer, US EPA
Russell Parks, Environmental Compliance Manager, Republic Airways
Brad Elstad, Vice President of Safety, Republic Airways
Lee Hayes, Director of Safety, Chautauqua Airlines
Rosalie Behning, Director of Safety, Chautauqua Airlines
Mike Lachner, Director of Safety, Shuttle America
Jeff Greubel, Director of Maintenance, Chautauqua Airlines
Lorraine DiMarco, Director of Maintenance, Shuttle America
John Martiney, Director Hazmat/Environmental Compliance

Meeting Purpose:

- Provide Compliance Assistance
- Review O& M Plan
- Review Aircraft Water System Files

Agenda:

Tuesday, November 27, 2012, 1:00pm – 5:00pm

- 1) Entrance Interview (Tuesday, 1 – 2 pm)
 - a. Introductions
 - b. Purpose of Visit
 - c. Review Roles and Responsibilities
 - d. General Updates
 - i. ARCS updates planned
 - ii. ARCS Training for Air Carriers – January 20, 2013
- 2) Begin Review of Documents
 - a. O&M Plan
 - b. Aircraft Records as highlighted in our letter of November 8, 2012

Wednesday, November 28, 2012, 8:30am – 5:00pm

(Breaking for Lunch from 12 noon – 1 pm)

- 3) Continue Review of Documents

Thursday, November 29, 2012, 8:00am – 12 noon

- 4) Complete Review of Documents
- 5) Exit Interview (Thursday, 11 am – 12 noon)
 - a. Findings
 - b. Wrap-up

U.S. EPA Small Business Resources Information Sheet

The United States Environmental Protection Agency provides an array of resources, including workshops, training sessions, hotlines, websites and guides, to help small businesses understand and comply with federal and state environmental laws. In addition to helping small businesses understand their environmental obligations and improve compliance, these resources will also help such businesses find cost-effective ways to comply through pollution prevention techniques and innovative technologies.

EPA's Small Business Websites

Small Business Environmental Homepage - www.smallbiz-enviroweb.org

Small Business Gateway - www.epa.gov/smallbusiness

EPA's Small Business Ombudsman - www.epa.gov/sbo or 1-800-368-5888

EPA's Compliance Assistance Homepage

[www.epa.gov/compliance/assistance/
business.html](http://www.epa.gov/compliance/assistance/business.html)

This page is a gateway to industry and statute-specific environmental resources, from extensive web-based information to hotlines and compliance assistance specialists.

EPA's Compliance Assistance Centers

www.assistancecenters.net

EPA's Compliance Assistance Centers provide information targeted to industries with many small businesses. They were developed in partnership with industry, universities and other federal and state agencies.

Agriculture

www.epa.gov/agriculture/

Automotive Recycling

www.ecarcenter.org

Automotive Service and Repair

www.ccar-greenlink.org or 1-888-GRN-LINK

Chemical Manufacturing

www.chemalliance.org

Construction

www.cicacenter.org or 1-734-995-4911

Education

www.campuserc.org

Food Processing

www.fpeac.org

Healthcare

www.hercenter.org

Local Government

www.lgean.org

Metal Finishing

www.nmfrc.org

Paints and Coatings

www.paintcenter.org

Printed Wiring Board Manufacturing

www.pwbrc.org

Printing

www.pneac.org

Ports

www.portcompliance.org

U.S. Border Compliance and Import/Export Issues

www.bordercenter.org

Hotlines, Helplines and Clearinghouses

www.epa.gov/epahome/hotline.htm

EPA sponsors many free hotlines and clearinghouses that provide convenient assistance regarding environmental requirements. Some examples are:

Antimicrobial Information Hotline

info-antimicrobial@epa.gov or
1-703-308-6411

Clean Air Technology Center (CATC) Info-line

www.epa.gov/ttn/catc or 1-919-541-0800

Emergency Planning and Community Right-To-Know Act

[www.epa.gov/superfund/resources/
infocenter/epcra.htm](http://www.epa.gov/superfund/resources/infocenter/epcra.htm) or 1-800-424-9346

EPA Imported Vehicles and Engines Public Helpline

www.epa.gov/otaq/imports or
734-214-4100

National Pesticide Information Center

www.npic.orst.edu/ or 1-800-858-7378

National Response Center Hotline -

to report oil and hazardous substance spills
www.nrc.uscg.mil or 1-800-424-8802

Pollution Prevention Information Clearinghouse (PPIC)

www.epa.gov/opptintr/ppic or
1-202-566-0799

Safe Drinking Water Hotline

[www.epa.gov/safewater/hotline/index.
html](http://www.epa.gov/safewater/hotline/index.html) or 1-800-426-4791

Stratospheric Ozone Protection Hotline

www.epa.gov/ozone or 1-800-296-1996

Toxic Substances Control Act (TSCA) Hotline

tsca-hotline@epa.gov or 1-202-554-1404

Wetlands Information Helpline

www.epa.gov/owow/wetlands/wetline.html or 1-800-832-7828

State and Tribal Web-Based Resources

State Resource Locators

www.envcap.org/statetools

The Locators provide state-specific contacts, regulations and resources covering the major environmental laws.

State Small Business Environmental Assistance Programs (SBEAPs)

www.smallbiz-enviroweb.org

State SBEAPs help small businesses and assistance providers understand environmental requirements and sustainable business practices through workshops, trainings and site visits. The website is a central point for sharing resources between EPA and states.

EPA's Tribal Compliance Assistance Center

www.epa.gov/tribalcompliance/index.html

The Center provides material to Tribes on environmental stewardship and regulations that might apply to tribal government operations.

EPA's Tribal Portal

www.epa.gov/tribalportal/

The Portal helps users locate tribal-related information within EPA and other federal agencies.

EPA Compliance Incentives

EPA provides incentives for environmental compliance. By participating in compliance assistance programs or voluntarily disclosing and promptly correcting violations before an enforcement action has been initiated, businesses may be eligible for penalty waivers or reductions. EPA has two such policies that may apply to small businesses:

EPA's Small Business Compliance Policy

www.epa.gov/compliance/incentives/smallbusiness/index.html

This Policy offers small businesses special incentives to come into compliance voluntarily.

EPA's Audit Policy

www.epa.gov/compliance/incentives/auditing/auditpolicy.html

The Policy provides incentives to all businesses that voluntarily discover, promptly disclose and expeditiously correct their noncompliance.

Commenting on Federal Enforcement Actions and Compliance Activities

The Small Business Regulatory Enforcement Fairness Act (SBREFA) established a SBREFA Ombudsman and 10 Regional Fairness Boards to receive comments from small businesses about federal agency enforcement actions. If you believe that you fall within the Small Business Administration's definition of a small business (based on your North American Industry Classification System designation, number of employees or annual receipts, as defined at 13 C.F.R. 121.201; in most cases, this means a business with 500 or fewer employees), and wish to comment on federal enforcement and compliance activities, call the SBREFA Ombudsman's toll-free number at 1-888-REG-FAIR (1-888-734-3247), or go to their website at www.sba.gov/ombudsman.

Every small business that is the subject of an enforcement or compliance action is entitled to comment on the Agency's actions without fear of retaliation. EPA employees are prohibited from using enforcement or any other means of retaliation against any member of the regulated community in response to comments made under SBREFA.

Your Duty to Comply

If you receive compliance assistance or submit a comment to the SBREFA Ombudsman or Regional Fairness Boards, you still have the duty to comply with the law, including providing timely responses to EPA information requests, administrative or civil complaints, other enforcement actions or communications. The assistance information and comment processes do not give you any new rights or defenses in any enforcement action. These processes also do not affect EPA's obligation to protect public health or the environment under any of the environmental statutes it enforces, including the right to take emergency remedial or emergency response actions when appropriate. Those decisions will be based on the facts in each situation. The SBREFA Ombudsman and Fairness Boards do not participate in resolving EPA's enforcement actions. Also, remember that to preserve your rights, you need to comply with all rules governing the enforcement process.

EPA is disseminating this information to you without making a determination that your business or organization is a small business as defined by Section 222 of the Small Business Regulatory Enforcement Fairness Act or related provisions.